



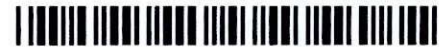
Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

PRELIMINARY ISSUE

650.8402

Job Sheet 213115



POSITIVE RECALL

EFFECTIVE 20/9/16 AUTH SAM
DAS
RELEASED 55 DATE SEP 17 2020
9-89 Priority: Medium

Part No: 650.8402

Job Qty: 10 pcs

Part Name: Plunger



Part Weight: 0 lbs

Status: New

Job Created: 9/16/20

Job Tracking No:

Due Date: 10/2/20

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG 650.8400 REV PA4 IPP REV A 20.09.14 NEW ISSUE FK VERIFY DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs		
100	SL-154 - 1	10 pcs	9/25/20		1.00	2.50	Doosan - 1	
							NLX 2500SY - 1	
							SL-154 - 1	
							SL-2500Y - 1	
110	QC 2	10 pcs	9/25/20		0.00	0.00	QC 2 - 1	
							QC 2 - 12	
							QC 2 - 14	
							QC 2 - 17	
							QC 2 - 19	
							QC 2 - 2	
							QC 2 - 20	
							QC 2 - 22	
							QC 2 - 23	
							QC 2 - 25	
							QC 2 - 32	
							QC 2 - 33	
							QC 2 - 35	
							QC 2 - 39	
							QC 2 - 4	
							QC 2 - 40	
							QC 2 - 44	
							QC 2 - 45	

Make per CNC program. SAM
~~Make all 10 parts without~~
~~Drawing~~ N/A Drawing (Prelim 4)
~~Make~~ - Please provide All
Parts to Engineering (Qty 10) SAM

SAM
20/09/20

DAS
55
9-89

SEP 17 2020



Container No: S301470



Part: 650.8402

Job No: 213115

Serial No/Batch: S301470

Revision: REV-PA4

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

QC2-62 JB 20.09.20

Plex 9/16/20 2:15 PM Dart.lajeunesse.marie

					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
					QC 2 - 76	
					QC 2 - 86	
					QC 2 - 83	
120	QC 8	10 pcs	9/25/20	0.00 0.00	QC 8 - 12	
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	De 20-09-21
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
					QC 8 - 76	
					QC 8 - 61	
					QC 8 - 66	
					QC 8 - 73	
					QC 8 - 82	
130	Outsource - 15 - Nickel Plate	10 pcs	10/2/20		GRO002-VC	5 Plus 21 sept 2020
140	Packaging 2-1 - Receive - B4B	10 pcs	10/2/20	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	

					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 37 - B4B	
150 QC 6	10 pcs	10/2/20	0.00	0.00	QC 6 - 9	
					QC 6 - 68	
					QC 6 - 61	
					QC 6 - 40	
					QC 6 - 81	
					QC 6 - 82	
155 QC 8	10 pcs	10/2/20	0.00	0.00	QC 8 - 12	
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
					QC 8 - 76	
					QC 8 - 61	
					QC 8 - 66	
					QC 8 - 73	
					QC 8 - 82	
					QC 8 - 81	
160 Packaging 3-1 - Stock - B4B	10 pcs	10/2/20	0.00	0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	

				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 37 - B4B	
170	QC 21 - SA	10 pcs	10/2/20	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
					QC 21 - SA - 9

Part Op **100** - ****CRITICAL PART - EXTREME CARE MUST BE TAKEN**** MUST ENSURE THE COMPONENTS ARE NEVER DAMAGE****
 Descriptions: NEVER DAMAGE**** 1-Machine as per folio FD370 FOLIO REV: AA DWG REV: PA 4 2-Debur
110 - QC2- Inspect parts off machine FAI/FAIB
120 - QC8- Inspect parts - second check
130 - -Issue P/O; _____ ELECTROLESS NICKEL PLATE IAW ASTM B733 TYPE 4/5 SC 2 AS PER DWG -
 Material type; STEEL 1215 -Certificate of Conformity is required
140 - Certificate of Conformity is required
150 - QC6- All purchased or subcontracted products
155 - Inspect dimensions after Nickel plate and record dimensions
160 - Identify as per dwg & Stock ****CRITICAL PART - EXTREME CARE MUST BE TAKEN**** MUST ENSURE THE COMPONENTS ARE NEVER DAMAGE****
170 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M1215R0.625	1215 Round Bar, 0.625" Diameter	1.0700 ft (.107 ea)	100-SL-154 - 1	<u>5286085</u>

Job Allocations

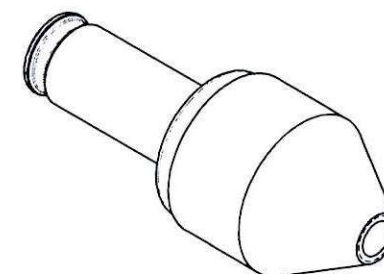
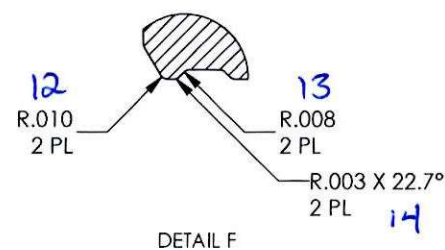
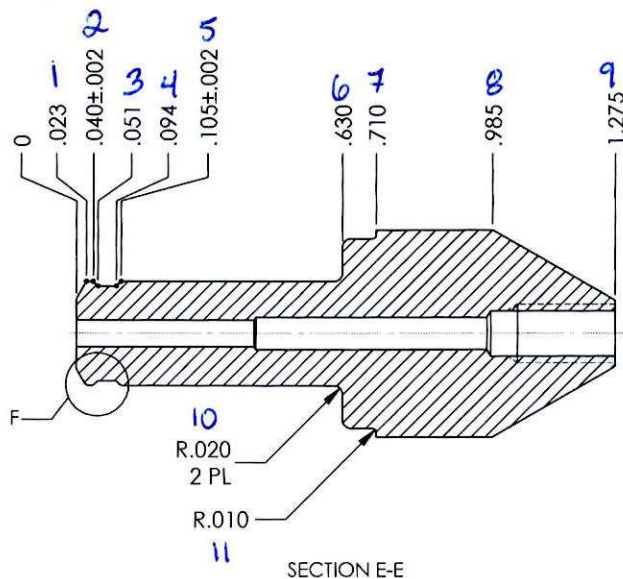
Operation	Component Part	Required	Inventory	Allocated
100-SL-154 - 1	M1215R0.625	1	2	0

Part Specifications

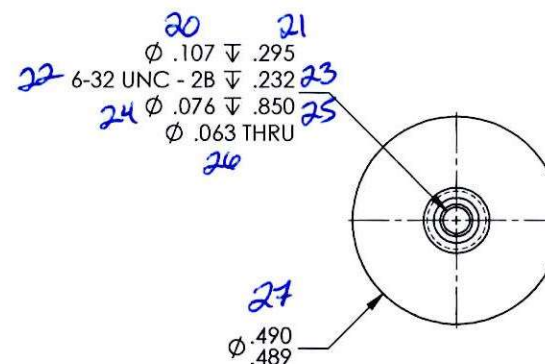
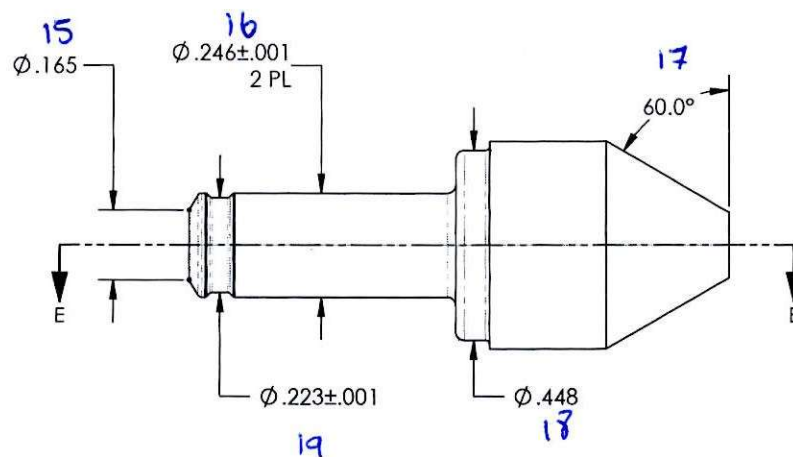
Specifications could not be found.

Plex 9/16/20 2:15 PM Dart.lajeunesse.marie

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



PA4 650.8402



ORIGINAL DATE (MM-DD-YY) 06-04-14		DART 3030 ENTERPRISE CT., SUITE A	
DRAWN BY J. GARDNER		VISTA, CA 92081	
CHECKED BY P. BRAVO		(760)-724-5300	
DRAWING APPROVAL P. BRAVO		APICAL INDUSTRIES, INC. (DBA DART AEROSPACE)	
DATE 04/04/14		PLUNGER	
CONTRACT NO.		REV. PA4	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		SCALE NONE	SHEET 3 OF 3

DART AEROSPACE LTD

Work Order:

650.8402

Description: PLUNGER

Part Number:

650.8402

Inspection Dwg: 650.8400

Rev: PA4

Page 1 of 1

INSPECTION SHEET

	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1	.023	± .005	.023 ⁶	✓		optical comp	
2	.040	± .002	.039	✓		optical comp	
3	.051	± .005	.050 ⁴	✓		optical comp	
4	.094	± .005	.093 ²	✓		optical comp	
5	.105	± .002	.104 ⁶	✓		optical comp.	
6	.630	± .005	.630 ⁸	✓		optical comp	
7	.710	± .005	.709 ⁸	✓		optical comp	
8	.985	± .005	.984 ⁶	✓		optical comp	
9	1.275	± .005	1.275 ⁸	✓		optical comp	
10	R .020 (2 PL)	± .005	R .020	✓		Rg 1/64 (Ref)	
11	R .010	± .005	R .010	✓		Rg 1/64 (Ref)	
12	R .010 (2 PL)	± .005	R .010	✓		Rg 1/64 (Ref)	
13	R .008 (2 PL)	± .005	R .008	✓		optical comp.	
14	R .003 X 22.7° (2PL)	± .005 X .5°	R .003 x 22.7°	✓		optical comp.	
15	Ø .165	± .005	.164 ⁸	✓		optical comp.	
16	Ø .246 (2 PL)	± .001	.245	✓		Mic JB-09	
17	60.0°	± .5°	60°	✓		optical comp.	
18	Ø .448	± .005	.447°	✓		mic JB-09	
19	Ø .223	± .001	.222	✓		Blade Mic LG-insp6	
20	Ø .107	± .005	.106	✓		GP .106 (Ref)	
21	.295 DEEP	± .005	.298 ⁵	✓		Vernier + GP JB-01	
22	6-32 UNC - 2B	GO / NO-GO	6-32 UNC 2B	✓		GO / NoGo 6-32 UNC 2B	
23	.232 DEEP	± .005	.232	✓		Vernier + setscrew JB-01	
24	Ø .076	± .005	.075	✓		GP .075 (Ref)	
25	.850 DEEP	± .005	.851	✓		Vernier + GP JB-01	
26	Ø .063 THRU	± .005	.062 THRU	✓		GP .062 (Ref)	
27	Ø .489	+ .001 / - .000	.489	✓		Mic JB-09	

DAS
62

Measured by: JB 9-89	Checked by: B.	QC Inspector:
Date: 20-09-20	Date: 20-09-21	Date:

Engineering Approval: (If necessary)	Date:
---	-------

Rev	Date	Change	Revised by	Approved
A	20-Sep-20	New Issue	MG	

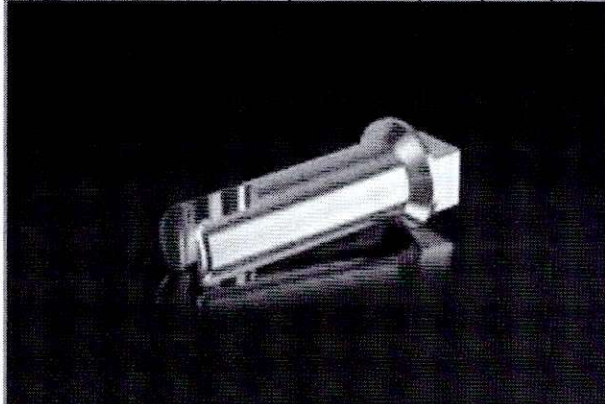
Electroless Nickel Plating to ASTM B733-04 (and newer)

Note: ASTM B733-04 is markedly updated from ASTM B733-90 in that the coating Type specifies the phosphorous content of the coating. ASTM B733-90 does not make this distinction.

Type I: No requirement of phosphorous

Type II: 1-3% phosphorous (low phosphorous)

Type III: 2-4% phosphorous (low phosphorous)



Type IV: 5-9% phosphorous (medium phosphorous)

Type V: 10% or greater phosphorous (high phosphorous)

SC0: Minimum Thickness 0.000004 in

SC1: Light Service 0.0002 in minimum

SC2: Mild Service 0.0005 in minimum

SC3: Moderate Service 0.001 in minimum

SC4: Severe Service 0.003 in minimum

Class 1: As-deposited, no heat treatment.

Class 2: Heat treatment at 260 to 400°C (500-752°F) to produce a minimum hardness of 850 HK100.

Class 3: Heat treatment at 180 to 200°C (356-392°F) for 2 to 4-hr to improve coating adhesion on steel and to provide for hydrogen embrittlement relief.

Class 4: Heat treatment at 120 to 130°C (248-266°F) for at least 1-hr to increase adhesion of heat-treatable (age-hardened) aluminum alloys (such as 7075) and carburized steel.

Class 5: Heat treatment at 140 to 150°C (284-302°F) for at least 1-hr to improve coating adhesion for aluminum, non age-hardened aluminum alloys, copper, copper alloys and beryllium.

Class 6: Heat treatment at 300 to 320°C (572-608°F) for at least 1-hr to improve coating adhesion for titanium alloys.